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INFO MEMO

ACQUISITION,
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FOR: UNDER SECRETARY OF DEFENSE (AT&L)

FROM: GARY R. BLISS, DIRECTOR, PERFORMANCE ASSESSMENTS AND ROOT
CAUSE ANALYSES

GRB

SUBJECT: PARCA's Root Cause Analysis of the Global Hawk Program

- This memorandum summarizes PARCA's root cause analysis of the Global Hawk program's increase of more than 25 percent in Average Unit Procurement Cost (APUC) relative to the current (2007) baseline. This was reported by the Air Force to USD(AT&L) in a memorandum dated April 6th, 2011.
 - The December 2010 SAR reported APUC cost growth of 22.9 percent. Since then, the cost position has deteriorated markedly. The program office estimate for APUC cost growth at the beginning of the Nunn-McCurdy certification process was 37 percent.
 - Development costs have also increased by 28 percent since 2007. The bulk of this growth has been systems engineering, program management, and testing. This does not contribute to the critical cost breach in APUC and is insufficient to cause a Program Acquisition Unit Cost (PAUC) critical breach.
- The proximate causes of the cost growth in APUC include more sparing/support equipment, a production acceptance test/modification facility, diminished manufacturing sources (DMS), rearchitectures of the communications and the ground station, replanning the operational testing, an increased number of more expensive Block 30 aircraft, and a sensor depot. Notably, the costs of the delivered Global Hawk airframes, payloads, and ground stations have remained constant since 2007.
- The root causes of the APUC cost growth in this program are as follows:
 - Approximately one-third of the total cost growth is due to the additional requirements for sparing, support equipment and changes in the mix of aircraft purchased. These factors are exogenous to the program.
 - Nearly one-half of the total cost growth is due to having known, but unfunded, requirements in the baseline and the deferral of development activities. The program structure reflected a spiral legacy which facilitated deferring requirement and activities. Budgetary pressures provided the motivation.

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- The root cause of remainder of the cost growth was primarily an unrealistic schedule based upon the continued underestimation of the differences between the RQ-4A and RQ-4B aircraft and systems integration requirements for the payloads.
- Several factors exacerbated this cost growth by affecting government and contractor ability to respond to issues. Qualitative impacts of these factors can be identified (such as the substantial remaining risk to achieve required reliability) but quantitative impacts are inextricably convoluted with the root causes above.
 - The management structure was unable to efficiently pursue the long-term development of a weapon system while responding to short-term operational priorities. This inability was particularly significant due to the challenges posed by the extreme concurrency of the program between development, production and sustainment and the extensive use of now-obsolescent, commercial-off-the-shelf (COTS) components.
 - The government incentives were unable to motivate Northrop-Grumman Corporation (NGC) to deliver on-time products of acceptable quality. The government negotiating position was also eroded by extreme delays in contract definitization.
 - The evolving acquisition environment makes it very difficult to incentivize the contractor to contain costs. NGC is the sole source for this system. Moreover, NGC is in an increasingly strong industrial position for unmanned aerial systems as it now receives five times as much development funding as any other company in this sector.
 - Oversight was not consistent and persistent. As examples, the approved 2007 Acquisition Strategy still explicitly continued the old spiral acquisition strategy and a reliability program was directed but not pursued.
- There are highly significant, future liabilities for the Global Hawk program that normally would have been addressed well before we had produced a significant number of aircraft. In its statutorily-required reviews, PARCA will assess the progress in addressing these liabilities which are:
 - An unusually high amount of retrofit which will result from improving reliability, improving affordability, and dealing with DMS issues.
 - An extensive (and currently ill-defined) reliability growth program that will be required to achieve operational objectives.

COORDINATION: NONE

cc: PDUSD AT&L

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